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Thomas Hilbert
Environmental Engineer
Winnebago Reclamation
8403 Lindenwood Rd.
Rockford, IL 61109
(815) 874-4806
July 19, 1993

Recycling and
waste disposal

Mr. Bernard Schorle
Remedial Project Manager
USEPA Region V
77 West Jackson Boulevard
Chicago, IL 60604-3590

Dear Bernie:

We would like to add Andrews Environmental Engineering, Inc. (AEEI) to the list of supervising contractors authorized to perform work on the Pagels Landfill RD/RA activities. It is our intent to have AEEI complete the work plan for the final cover portion of the RD/RA. AEEI has an excellent understanding of Illinois regulations governing landfill operations and design. In addition, they have an extensive amount of experience in the design of landfill facilities. They are very familiar with the existing landfill and were successful at completing the design and permitting process for the landfill expansion. I have enclosed the Statement of Qualifications indicating their capabilities.

If you have questions that you would like to direct to them, Andy Rathsack will be acting as Project Manager, and Dan Feezor will be organizing the design documents. Their phone number and address is listed on their Statement of Qualifications.

P.O. Box 2071
Loves Park
Illinois 61130

Sincerely,

Thomas Hilbert

cc: Andy Rathsack
Al Schmidt
John Holmstrom

815.654.5952
Fax 815.654.4717

ANDREWS ENVIRONMENTAL ENGINEERING, INC.

STATEMENT OF QUALIFICATIONS

Size and Location

Andrews Environmental Engineering, Inc. (AEEI) employs a staff of twenty-four (24) full-time employees including:

Professional Engineers	4
Environmental Engineers	5
Environmental Scientists	1
Hydrogeologists	4
Chemists	1
Draftsmen	1
Senior Technician	1
Technicians	3
Business Administrator	1
Staff Assistants/Clerical	3

Office is located at:

3535 Mayflower Boulevard
White Oaks Business Park
Springfield, IL 62707
Business Phone: (217) 787-2334

Fax Phone: (217) 787-9495

Background

AEEI was founded on April 8, 1974 by its President and Principal Engineer, J. Douglas Andrews. Prior to this, Mr. Andrews attained the position of Division Manager for the Illinois Environmental Protection Agency's Division of Land Pollution Control in 1973. As Division Manager, Mr. Andrews supervised a staff of approximately 40 Engineers, Geologists, Scientists, Environmental Technicians and Clerical personnel. Responsibilities included statewide control of waste management sites within Illinois under the Illinois Environmental Protection Act and the Solid Waste Rules and Regulations of the Illinois Pollution Control Board. Given this experience, AEEI from its founding has specialized in solid waste facility planning, design and permitting activities.

Scope of Services

AEEI is a consulting environmental engineering firm that provides planning, design, and maintenance resources for government, business, and individuals. The firm is comprised of three (3) major Divisions--Solid Waste Management, Environmental Services, and Remediation Services. Work done by the firm includes siting and design of more than fifty (50) sanitary landfills, ten (10) transfer stations, recycling operations, waste site remediation, property transfer audits, waste-to-energy plants, composting sites, and other waste management facilities.

Experience

Since 1981 local siting approval has been required for new Regional Pollution Control Facilities in Illinois. AEEI has an unequalled record of experience and success in these siting activities. AEEI has been involved in 35 separate local siting applications and has a success rate of about 90 percent. This compares to a total 104 successful sitings and a 60 percent success rate as reported by the Illinois EPA in their October, 1990 report entitled "Regional Pollution Control Facility Siting in Illinois".

Since 1988 AEEI has designed 18 landfill facilities or expansions in Illinois for siting and/or IEPA permit application which have included compacted clay or composite compacted clay/geomembrane liner systems with leachate collection. Three have been double composite liner systems with a leachate detection witness zone between the liners. Two have utilized a composite primary liner with a secondary compacted clay liner and a leachate detection witness zone between them. Five have utilized single composite liner systems and the remainder have been single compacted clay liner systems. In addition, four of these 18 designs were integrated material recovery/landfill facilities and two were balefills.

On September 18, 1990 new regulations for the design and operation of solid waste landfills became effective in Illinois. AEEI clients received two (2) of the five (5) new facility permits issued under these regulations. Both the Illinois EPA as well as the regulated community have struggled to interpret what constitutes an acceptable permit application. The Gallatin National Landfill in Fulton County was issued a permit in the Fall of 1990 by an Illinois Pollution Control Board Order. An expansion unit of the CDT Landfill near Joliet, and an expansion of the Winnebago Reclamation Landfill near Rockford (AEEI), Waste Management's Milam Landfill near East St. Louis, and Streator Area Landfill (AEEI) were issued in the past several months. In the past two years, AEEI has prepared and submitted seven permit applications to the IEPA pursuant to 35 IAC 811 or 814 Subpart C. Also, AEEI has prepared and submitted a facility report pursuant to 35 IAC 815. Due to the preparation of these several applications and the numerous meetings/communications with the IEPA, AEEI has developed a keen understanding of the permitting process under the new regulations and what the Agency expects in an application. AEEI is also familiar with the 40 CFR Parts 257 and 258 (i.e. Subtitle D of RCRA) regulations for landfills and has been closely following the Illinois EPA's efforts to secure authorization to administer them.

In conjunction with the above referenced 35 IAC 811-814 permitting, AEEI has developed a vast amount of experience performing computerized groundwater contaminant transport modeling and groundwater impact assessments. AEEI has the software and capability of performing one, two and three dimensional groundwater modeling evaluations. This modeling experience compliments the firm's other hydrogeological experience which includes field investigations, reports, and monitoring programs for more than 50 landfills in Illinois. AEEI's Hydrogeologic Staff has provided contaminant transport modeling, well spacing determination modeling, and monitoring program assessments in conjunction with several recent permits.

To further expand the capability to conduct hydrogeologic investigations and implement groundwater monitoring programs, AEEI has the availability of a sister company, AE Exploration Corporation, which performs subsurface drilling, monitor well/piezometer installations, and in-situ and laboratory soil/rock testing. In addition to testing conducted by AE Exploration, AEEI possesses sealed double-ring infiltrometer equipment and experience in its set-up and use for determination of field hydraulic conductivity of clay liners.

AEEI has experience and provides other services related to landfill development and operation. Among other things, these include construction oversight and groundwater quality monitoring and reporting. For example, AEEI monitors construction at the Gallatin National Landfill for the Village of Fairview (its host community) and at several other landfills. Also, AEEI routinely conducts groundwater sampling/monitoring at 26 landfill facilities.

AEEI has also provided a variety of services involving design, permit application preparation and/or construction oversight for several monofill (one waste landfill) facilities.

Professional Background of Key Personnel

Please review the accompanying "Educational and Professional Background" for:

James Douglas Andrews, P.E.
President and Principal Engineer

Andrew A. Rath sack, P.E.
Vice President and Director
Division of Solid Waste Management

Gregory D. Kugler, M.S.
Vice President and Director
Division of Environmental Services

- EDUCATIONAL & PROFESSIONAL BACKGROUND -

**James Douglas Andrews, P.E.,
President**

**Andrews Environmental Engineering, Inc.
3535 Mayflower Boulevard
Springfield, Illinois 62707-9401**

Area Code: (217) 787-2334

EDUCATION:

**Bachelor of Science
Civil Engineering -- 1961
University of Tennessee
Knoxville, Tennessee**

**POST GRADUATE & PROFESSIONAL
DEVELOPMENT STUDIES, CONFERENCES
AND WORKSHOPS:**

- 1). **Sanitary Landfill Design Conference**
Engineering Foundation
Saxtons River, VT 1972
- 2). **Hazardous Waste Conference**
U.S. Environmental Protection Agency
Chicago, IL 1972
- 3). **Land Disposal Workshop**
U.S. Environmental Protection Agency
Chicago, IL 1972
- 4). **Solid Waste Systems Planning**
U.S. Environmental Protection Agency
Chicago, IL 1972
- 5). **Areawide Solid Waste Management**
Planning, Designing & Implementing
University of Wisconsin - Extension
Madison, WI 1973
- 6). **National Solid Waste Management**
Association - U. S. Environmental
Protection Agency
Joint Conference Solid Waste Management 1973 & 1977

EDUCATIONAL & PROFESSIONAL BACKGROUND

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**James Douglas Andrews, P.E.,
President**

POST GRADUATE & PROFESSIONAL DEVELOPMENT STUDIES, CONFERENCES AND WORKSHOPScontinued

- 7). **Land Disposal of Hazardous Wastes**
U.S. Environmental Protection Agency
and Southwest Research Institute
San Antonio, TX 1978
- 8). **Illinois Waste Alert**
Illinois Environmental Protection Agency
Chicago, IL 1980 & 1981
- 9). **Ninth Annual Research Symposium**
Land Disposal, Incineration and
Treatment of Hazardous Waste
U.S. Environmental Protection Agency
and Southwest Research Institute
Cincinnati, OH 1983
- 10). **Second International Symposium**
on Operating European Chemical
Waste Management Facilities
Odense, Denmark 1984
- 11). **Waste Expo**
National Solid Waste Management
Association
Chicago, IL 1989

PUBLICATIONS & LECTURES:

- 1). **Cost of Sanitary Landfill Development & Operation in Illinois**
IIEQ Document Number 77/15
James Douglas Andrews, P.E. 1976
- 2). Contributions to **Economic Impact of the Proposed Illinois**
Special Waste Hauling Regulations
IIEQ Document Number 77/26
ETA Engineering, Inc. 1977

**James Douglas Andrews, P.E.,
President**

PUBLICATIONS & LECTURES ...(continued)

- 3). **"Hazardous Waste Landfill Design, Development & Operation"**
Lecture presented to:
Vanderbilt University
Center for Environmental Management 1979 & 1980
- 4). **Illinois Waste Facilities Inventory**
State of Illinois
Environmental Protection Agency 1981
- 5). **"Past, Present & Future of the Solid Waste Management Industry in Illinois"**
Lecture presented to:
Management Seminar
Sangamon State University 1990

Southern Illinois University
(Edwardsville) 1991

**PROFESSIONAL EXPERIENCE IN
WASTE MANAGEMENT-RELATED
ENVIRONMENTAL ENGINEERING:**

November, 1971 to
March, 1974

Illinois Environmental Protection Agency
Springfield, Illinois
Title: Division Manager (1973)
Division of Land Pollution Control

Responsible for statewide control of waste management sites under the Illinois Environmental Protection Act and the Solid Waste Rules and Regulations of the Illinois Pollution Control Board.

Supervised a staff of approximately 40 Engineers, Geologists, Scientists, Environmental Technicians and Clerical personnel dealing with program development, planning, permits, surveillance, training grants, variance and all other aspects of the Solid Waste Regulatory Program in Illinois.

April, 1974 to the Present

Andrews Environmental Engineering, Inc.
Springfield, Illinois
Title: President and Principal Engineer

Consulting environmental engineering firm provides planning, design and maintenance resources for government, business and individuals. Work done by the firm includes design of more than fifty (50) sanitary landfills, ten (10) transfer stations, recycling operations, waste site remediation, property transfer audits, waste-to-energy plants, composting sites and other waste management facilities.

EDUCATIONAL & PROFESSIONAL BACKGROUND

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**James Douglas Andrews, P.E.,
President**

PROFESSIONAL AFFILIATIONS:

<u>Member:</u>	Illinois Society of Professional Engineers Former Chairman, Environmental Quality Committee
<u>Member:</u>	Consulting Engineers Council of Illinois
<u>Associate Member:</u>	American Society of Civil Engineers
<u>Associate Member:</u>	Illinois Solid Waste Association
<u>Member:</u>	Illinois State Chamber of Commerce Environmental Affairs Committee
<u>Vice-Chairman:</u>	American Society of Civil Engineers Task Group for Re-write of <u>Sanitary Landfill</u> Manual
<u>Member:</u>	Illinois Environmental Regulatory Group Responsible Property Transfer Coalition

PUBLIC AFFILIATIONS:

Formerly, Ex-Officio Member of
Illinois Solid Waste Management Task Force
1973 - 1974

Illinois Recycling Association

Illinois Vehicle Recycling Board
by appointment of
Governor Daniel Walker
1974

Advisory Council
Illinois Industrial Material Exchange Service

PROFESSIONAL REGISTRATION:

Illinois	(1973)
Tennessee	(1978)
Indiana	(1980)

- EDUCATIONAL & PROFESSIONAL BACKGROUND -

**Andrew A. Rathsack, P.E.,
Vice President and Director
Division of Solid Waste Management**

**Andrews Environmental Engineering, Inc.
3535 Mayflower Boulevard
Springfield, Illinois 62707-9401**

Area Code: (217) 787-2334

EDUCATION:

Bachelor of Science
Civil Engineering -- 1972
University of Wisconsin
Madison, Wisconsin

Master of Science
Environmental Engineering -- 1978
University of Illinois
Urbana, Illinois

**POST GRADUATE & PROFESSIONAL
DEVELOPMENT STUDIES, CONFERENCES
AND WORKSHOPS:**

1). **Industrial Waste Conference**
Purdue University
Lafayette, IN 1974 & 1975

2). **Hazardous Waste Conference**
Illinois Institute of Natural Resources
Springfield, IL 1978

3). **Hazardous Waste Management**
University of Wisconsin - Extension
Madison, WI 1979

4). **Treatment & Disposal of Hazardous Wastes**
U.S. Environmental Protection Agency
Southwest Research Institute
Chicago, IL 1980

5). **Toxic Organic Wastes Seminar**
University of Missouri - Columbia
St. Louis, MO 1984

6). **Hazardous Substances Alternative
Treatment Technologies**
Illinois EPA & Illinois Chamber of Commerce
Springfield, IL 1985

EDUCATIONAL & PROFESSIONAL BACKGROUND

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**Andrew A. Rath sack, P.E.,
Vice President and Director
Division of Solid Waste Management**

- 7) **HELP Model Workshop**
University of Wisconsin - Milwaukee
Milwaukee, WI 1989
- 8) **Sanitary Landfill Leachate and Gas Management**
University of Wisconsin - Madison
Madison, WI 1990
- 9) **Dale Carnegie Course Graduate and two-time Graduate Assistant**
Springfield, IL 1990
- 10) **Fundamental Computer Aided Drafting**
Lincolnland Community College
Springfield, IL 1991
- 11) **Designing and Implementing Material Recovery Facilities**
University of Wisconsin - Madison
Madison, WI 1992

PROFESSIONAL EXPERIENCE IN WASTE MANAGEMENT-RELATED ENVIRONMENTAL ENGINEERING:

February, 1972 to April, 1978

Clark, Dietz Engineering, Inc.
Urbana, Illinois
Title: Project Manager (1978)
Industrial Waste Division

Positions held in the firm's Industrial Waste Division were Design Engineer, Project Engineer and Project Manager. In these various positions, direct involvement in virtually all phases of civil/environmental engineering -- as it relates to the industrial wastewater -- was realized. These include: sampling and flow monitoring, treatability, hydrologic and surface runoff studies; preliminary reports, wastewater treatment facility; waste and storm water pump, sewer and site grading design; drawing layout, detailing and preparation; specification writing; value engineering; regulatory agency permit application preparation; construction cost estimating; shop drawing review, and post-construction final inspections. As Project Engineer and Project Manager, responsibilities also included planning, coordination and budgeting of these types of projects as well. While being fully employed with the firm, a Master of Science degree in Environmental/Civil Engineering was achieved by pursuing graduate study on a one course per semester basis.

EDUCATIONAL & PROFESSIONAL BACKGROUND

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**Andrew A. Rathsack, P.E.,
Vice President and Director
Division of Solid Waste Management**

May, 1978 to the Present

**Andrews Environmental Engineering, Inc.
Springfield, Illinois
Title: Project Manager & Corporate Director**

Responsibilities include planning, design, regulatory permit application preparation, coordination and development/operational supervision of various environmental projects. The majority of these projects have been related to solid waste management and industrial residue disposal.

Other projects have included preparation of site remedial and closure plans, environmental assessment and Corps of Engineers, Metropolitan Sanitary District of Greater Chicago Sewage System, Illinois Department of Transportation - Division of Water Resources, N.P.D.E.S., Mine Related Pollution Control and Air Pollution Control permit applications.

PROFESSIONAL AFFILIATIONS:

<u>Member:</u>	Illinois Society of Professional Engineers Environmental Quality Committee Capital Chapter "Young Engineer of the Year" Candidate, 1979
<u>Member:</u>	American Society of Civil Engineers
<u>Member:</u>	Illinois Groundwater Association
<u>Member:</u>	Consulting Engineers Council of Illinois
<u>Member:</u>	Illinois EPA Clean Air Act Forum Committee
<u>Member:</u>	Illinois EPA NPDES Stormwater Advisory Committee

PROFESSIONAL REGISTRATION:

Wisconsin	1976
Illinois	1977
Kentucky	1977
Missouri	1978
Michigan	1985

- EDUCATIONAL & PROFESSIONAL BACKGROUND -

**Gregory D. Kugler,
Vice President and Director
Division of Environmental Services**

**Andrews Environmental Engineering, Inc.
3535 Mayflower Boulevard
Springfield, Illinois 62707-9401**

Area Code: (217) 787-2334

EDUCATION:

Bachelor of Science
Zoology and Environmental Biology -- 1976
Eastern Illinois University
Charleston, Illinois

Master of Science
Botany -- 1980
Eastern Illinois University
Charleston, Illinois

**POST GRADUATE & PROFESSIONAL
DEVELOPMENT STUDIES, CONFERENCES
AND WORKSHOPS:**

- 1). **Illinois Waste Alert**
Illinois Environmental Protection Agency
Chicago, IL 1980
- 2). **Soil Permeability and Landfill Siting**
Illinois Environmental Protection Agency
Springfield, IL 1980
- 3). **Hazardous Waste Testing Methodology & Treatability**
Illinois Environmental Protection Agency
Springfield, IL 1981
- 4). **Construction & Monitoring Aspect of Landfill Siting**
Illinois Environmental Protection Agency
Springfield, IL 1981
- 5). **IEPA, USEPA Rules and Regulations**
Illinois Environmental Protection Agency
Springfield, IL 1981
- 6). **Chemical Safety in Illinois**
Illinois State Chamber of Commerce
Springfield, IL 1986

EDUCATIONAL & PROFESSIONAL BACKGROUND

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**Gregory D. Kugler,
Vice President and Director
Division of Environmental Services**

POST GRADUATE & PROFESSIONAL DEVELOPMENT STUDIES, CONFERENCES AND WORKSHOPS..continued

- 7). **Superfund Title III and the OSHA
Hazard Communication Standard**
Illinois State Chamber of Commerce
Springfield, IL 1987
- 8). **OSHA Safety Standards as they Pertain
to Regional Pollution Control Facilities**
National Solid Waste Management Association
Springfield, IL 1989
- 9). **Design of Water Quality Monitoring Networks**
Colorado State University
Fort Collins, CO 1989

PUBLICATIONS:

- 1). **Illinois Industrial Waste Survey Data Summary**
Illinois Environmental Protection Agency 1980
- 2). **Land Pollution Control Program Fiscal Year 1982**
Illinois Environmental Protection Agency 1981

EDUCATIONAL & PROFESSIONAL BACKGROUND

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**Gregory D. Kugler,
Vice President and Director
Division of Environmental Services**

PROFESSIONAL EXPERIENCE IN WASTE MANAGEMENT-RELATED ENVIRONMENTAL ENGINEERING:

March, 1980 to August, 1981

**Illinois Environmental Protection Agency
Springfield, Illinois
Title: Environmental Protection Specialist I**

Monitored progress, reviewed and analyzed results of four Illinois waste assessment and management studies. Assisted in preparation of Agency Waste Management Plan, State Hazardous Waste Programs and Regulations, Federal RCRA Grants and Interim Authorization Application.

September, 1981 to the Present

**Andrews Environmental Engineering, Inc.
Springfield, Illinois
Title: Senior Environmental Scientist**

Responsible for the preparation of the design, siting applicants and Illinois EPA permit applications for solid waste management facilities including landfills, transfer stations and compost facilities. Prepares supplemental permit to accept special wastes and for modification of site development and operation. Assists clients in the interpretation and compliance of the IEPA and RCRA regulations -- including development and implementation of water monitoring and sampling programs, facility closure plans and hazardous material handling and/or disposal. Supervises environmental property audits at commercial and industrial sites as well as remedial investigation work at CERCLA cleanup sites.

CERTIFICATIONS:

**Institute of Hazardous Materials Management
Certified Hazardous Materials Manager -- Master Level
July, 1986**

**Health & Safety Training for the Hazardous
Waste Operations and Emergency Response
University of Wisconsin - Madison
College of Engineering
December, 1988**

**Managing Hazardous Waste Operations
University of Wisconsin - Madison
College of Engineering
December, 1988**